

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

- 5     1 (previously presented): A method for fabricating a routing layout design, the method comprising:
- (a) forming a plurality of metal traces on a first routing layer and a second routing layer; and
- 10     (b) positioning a plurality of vias within a via layer disposed between the first and second routing layers for connecting the metal traces on the first and second routing layers according to a first current route defined by a predetermined circuit layout design used for connecting a first node and a second node so as to establish a second current route equivalent to the first current route.
- 15     2 (original): The method of claim 1, wherein the step (a) comprises:
- positioning a plurality of first conducting wires and a plurality of second conducting wires on a plurality of horizontal tracks and a plurality of vertical tracks of the first routing layer respectively;
- 20     and
- positioning a plurality of third conducting wires and a plurality of fourth conducting wires on a plurality of horizontal tracks and a plurality of vertical tracks of the second routing layer respectively, the third conducting wire on a k<sup>th</sup> horizontal track of the second routing layer vertically overlapping the first conducting wire on
- 25     the k<sup>th</sup> horizontal track of the first routing layer.

3 (original): The method of claim 2, wherein the step (b) comprises:

5 positioning one of the vias within the via layer for electrically  
connecting the first conducting wire on the  $k^{\text{th}}$  horizontal track of  
the first routing layer and the third conducting wire on the  $k^{\text{th}}$   
horizontal track of the second routing layer when the first node  
and the second node are electrically connected to the first  
conducting wire on the  $k^{\text{th}}$  horizontal track of the first routing  
layer and the third conducting wire on the  $k^{\text{th}}$  horizontal track of  
the second routing layer respectively.

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4 (original): The method of claim 1, wherein the step (a) comprises:

15 positioning a plurality of first conducting wires and a plurality of  
second conducting wires on a plurality of horizontal tracks and a  
plurality of vertical tracks of the first routing layer respectively;  
and  
positioning a plurality of third conducting wires and a plurality of  
fourth conducting wires on a plurality of horizontal tracks and a  
plurality of vertical tracks of the second routing layer respectively,  
the third conducting wire on an  $m^{\text{th}}$  horizontal track of the second  
20 routing layer partially overlapping the second conducting wire on  
an  $n^{\text{th}}$  vertical track of the first routing layer.

5 (original): The method of claim 4, wherein the step (b) comprises:

25 positioning one of the vias within the via layer for electrically  
connecting the second conducting wire on the  $n^{\text{th}}$  vertical track of  
the first routing layer and the third conducting wire on the  $m^{\text{th}}$   
horizontal track of the second routing layer when the first node is  
electrically connected to the second conducting wire on the  $n^{\text{th}}$

vertical track of the first routing layer and the second node is electrically connected to the third conducting wire on the  $m^{\text{th}}$  horizontal track of the second routing layer.

5 6 (original): The method of claim 4, wherein the third conducting wire on the  $m^{\text{th}}$  horizontal track of the second routing layer partially overlaps the first conducting wire on the  $m^{\text{th}}$  horizontal track of the first routing layer, and the first conducting wire on the  $m^{\text{th}}$  horizontal track of the first routing layer partially overlaps the fourth conducting wire on the  
10  $n^{\text{th}}+1$  vertical track of the second routing layer.

7 (original): The method of claim 4, wherein the second conducting wire on the  $n^{\text{th}}$  vertical track of the first routing layer partially overlaps the fourth conducting wire on the  $n^{\text{th}}$  vertical track of the second routing  
15 layer, and the first conducting wire on the  $m^{\text{th}}+1$  horizontal track of the first routing layer partially overlaps the fourth conducting wire on the  $n^{\text{th}}$  vertical track of the second routing layer.

8 (original): The method of claim 1, wherein the step (a) comprises:  
20 positioning a plurality of first conducting wires and a plurality of second conducting wires on a plurality of horizontal tracks and on a plurality of vertical tracks of the first routing layer respectively;  
and  
positioning a plurality of third conducting wires and a plurality of  
25 fourth conducting wires on a plurality of horizontal tracks and on a plurality of vertical tracks of the second routing layer respectively, the fourth conducting wire on an  $r^{\text{th}}$  vertical track of the second routing layer partially overlapping the second

conducting wire on the  $r^{\text{th}}$  vertical track of the first routing layer.

9 (original): The method of claim 8, wherein the step (b) comprises:

5 positioning one of the vias within the via layer for electrically  
connecting the second conducting wire on the  $r^{\text{th}}$  vertical track of  
the first routing layer and the fourth conducting wire on the  $r^{\text{th}}$   
vertical track of the second routing layer when the first node is  
electrically connected to the second conducting wire on the  $r^{\text{th}}$   
vertical track of the first routing layer and the second node is  
10 electrically connected to the fourth conducting wire on the  $r^{\text{th}}$   
vertical track of the second routing layer.

10 (original): The method of claim 1, wherein the step (a) comprises:

15 positioning a plurality of first conducting wires and a plurality of  
second conducting wires on a plurality of horizontal tracks and on  
a plurality of vertical tracks of the first routing layer respectively;  
and  
positioning a plurality of third conducting wires and a plurality of  
fourth conducting wires on a plurality of horizontal tracks and on  
20 a plurality of vertical tracks of the second routing layer  
respectively, the fourth conducting wire on an  $s^{\text{th}}$  vertical track of  
the second routing layer partially overlapping the first conducting  
wire on a  $t^{\text{th}}$  horizontal track of the first routing layer.

25 11 (original): The method of claim 10, wherein the step (b) comprises:

positioning one of the vias within the via layer for electrically  
connecting the first conducting wire on the  $t^{\text{th}}$  horizontal track of  
the first routing layer and the fourth conducting wire on the  $s^{\text{th}}$

5 vertical track of the second routing layer when the first node is electrically connected to the first conducting wire on the  $t^{\text{th}}$  horizontal track of the first routing layer and the second node is electrically connected to the fourth conducting wire on the  $s^{\text{th}}$  vertical track of the second routing layer.

10 12 (original): The method of claim 10, wherein the first conducting wire on the  $t^{\text{th}}$  horizontal track of the first routing layer partially overlaps the third conducting wire on the  $t^{\text{th}}$  horizontal track of the second routing layer, and the third conducting wire on the  $t^{\text{th}}$  horizontal track of the second routing layer partially overlaps the second conducting wire on the  $s^{\text{th}}+1$  vertical track of the first routing layer.

15 13 (original): The method of claim 10, wherein the second conducting wire on the  $s^{\text{th}}$  vertical track of the second routing layer partially overlaps the second conducting wire on the  $s^{\text{th}}$  vertical track of the first routing layer, and the second conducting wire on the  $s^{\text{th}}$  vertical track of the first routing layer partially overlaps the third conducting wire on the  $t^{\text{th}}+1$  horizontal track of the first routing layer.

20 14 (original): The method of claim 1, wherein the metal traces on the first routing layer and the corresponding metal traces on the second routing layer have substantially the same lengths.

25 15 (original): The method of claim 1 being applied to a multi-layer circuit board.

16 (original): The method of claim 1 being applied to a semiconductor

Appl. No. 10/708,785  
Amdt. dated March 02, 2007  
Reply to Office action of February 01, 2007

device.

17-20 (cancelled).

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